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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,588	11/15/2001	Kazuyasu Nishikawa	401458/Fukami	7378

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LEYDIG VOIT & MAYER, LTD
700 THIRTEENTH ST. NW
SUITE 300
WASHINGTON, DC 20005-3960

EXAMINER

VU, JIMMY T

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/987,588

Applicant(s)

NISHIKAWA ET AL

Examiner

Jimmy T Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18 and 19 is/are allowed.
- 6) ☒ Claim(s) 11, 15 and 17 is/are rejected.
- 7) ☒ Claim(s) 12-14 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in 09/987,588 on 11/15/2001. It is noted, however, that applicant has not filed a certified copy of the 09/987,588 application as required by 35 U.S.C. 119(b).

Information Disclosure Statement

2. The references listed on the information disclosure statement submitted on 06/18/2003 and 10/28/2003 have been considered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 11, 15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishikawa (Japan Patent number JP 11087091 A, cited by applicant).

Regarding claim 11, Nishikawa discloses a plasma generating apparatus comprising:

a chamber (3);

a dielectric (4) within said chamber;

a high-frequency power supply (10) (Fig. 3) for applying high frequency energy to

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said dielectric to form a sheet plasma that reflects directional electromagnetic waves from a surface of said dielectric; and

dielectric driving means for driving said dielectric to change an angle of the sheet plasma relative to said chamber (Fig. 3 and Abstract).

Regarding claim 15, Nishikawa discloses a plasma generating apparatus comprising:

a chamber (3);

an anode (2) and a cathode (1) within said chamber;

a power supply (Fig. 3) for applying a voltage to said anode and said cathode to form a low-density plasma between said anode and said cathode;

high-frequency supply means (10) for supplying a high frequency energy to the low-density plasma to form a sheet plasma that reflects directional electromagnetic waves; and

a moving mechanism (4) for moving said high-frequency supply means to change position of the sheet plasma (Figs. 1-4 and Abstract).

Regarding claim 17, Nishikawa discloses a plasma generating apparatus comprising:

a chamber (3);

an anode (2) and a cathode (1) within said chamber,

a power supply (Fig. 3) for applying a voltage to said anode and said cathode to form a low-density plasma between said anode and said cathode; and

a plurality of high-frequency supply means (10) for supplying high-frequency energy to the low-density plasma to form a sheet plasma that reflects directional electromagnetic waves (Figs. 1-4 and Abstract).

Allowable Subject Matter

5. Claims 19 and 19 are allowed.
6. Claims 12-14 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the prior art teaches the plasma generating apparatus including the metal plate and the nozzle for jetting the electron beam toward the metal plate to form the sheet plasma that reflects directional electromagnetic waves, and the nozzle driving means for driving nozzle, and including the member of the high-frequency non-transmitting material attached to one surface of the dielectric.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy T Vu whose telephone number is (571) 272-1832. The examiner can normally be reached on M - F: 9 - 6:00.

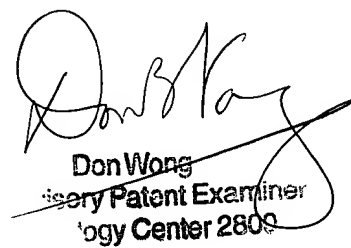
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1553.

Jimmy Vu

February 09, 2004


Don Wong
Primary Patent Examiner
Technology Center 2800